

## ***Salmonella* infections from reptiles in FoodNet Sites: the resurgence of a preventable illness**

**Mermin J**, Hutwagner L, Vugia D, Kirley P, Bender J, Koehler J, McGivern T, Marcus R, Angulo F, and the FoodNet Working Group

**Background:** Reported reptile-associated *Salmonella* infections, which may cause serious illness including meningitis and death, appear to be increasing. To estimate the magnitude of reptile-associated salmonellosis in the United States, we conducted two 12-month population-based case-control studies in five the Foodborne Diseases Active Surveillance Network (FoodNet) sites (CA CT, GA, MN, and OR) in 1996-1997.

**Methods:** Cases were identified via active laboratory-based surveillance and interviewed about exposures during the 5 days before illness onset. The first study involved patients infected with non-typhoidal group B and D *Salmonella*. In all five sites the second involved patients with non-group B and D *Salmonella* infection in the California site only. Population-based controls were obtained by telephone using random digit dialing.

**Results:** In the first study, 463 cases of group B and D *Salmonella* infection and 7618 controls were interviewed. Illness was associated with having a reptile or amphibian in the home (odds ratio [OR]= 1.7, 95% confidence interval [CI]=1.1-2.4) and touching a reptile (OR=1.5, 95% CI=1.0-2.4). The population attributable risk for reptile or amphibian exposure was 3%. In the second study, 30 cases of non-group B and D *Salmonella* and 1429 controls were interviewed. Illness was also associated with reptile or amphibian exposure (OR=3.8, 95% CI=1.3-11.2), with a population attributable risk of 18%.

**Conclusion:** Direct and indirect exposure to reptiles and amphibians is associated with a significant proportion of all *Salmonella* infections in the United States. Health care providers should ask about reptile and amphibian exposure when interviewing patients with salmonellosis, and efforts to prevent salmonellosis should include educational messages targeting reptile owners about strict adherence to hand-washing recommendations after handling their pets.

### **Suggested citation:**

Mermin J, Hutwagner L, Vugia D, Kirley P, Bender J, Koehler J, McGivern T, Marcus R, Angulo F, and the FoodNet Working Group. *Salmonella* infections from reptiles in FoodNet Sites: the resurgence of a preventable illness. 36th Annual Meeting of the Infectious Disease Society of America. Denver, CO, November 1998.